

Dr Dan Richardson

dan.richardson.gs@gmail.com

(+61)426236448

<https://danrichardson.me>

<https://github.com/GSDan>

Full stack software engineer, designer and human-computer interaction researcher, with extensive experience in leading projects, hosting client-facing interactions, and working in cross-disciplinary teams. I have designed, developed and published mobile and full-stack web applications across multiple technologies with several partner organisations, and am well published in technology design research using participatory methods to engage with stakeholders.

CORE TECHNICAL SKILLS

Languages: Javascript, HTML/CSS, C#, TypeScript, Java, Python, C++, SQL

Frameworks & Libraries: Vue.js, Quasar, React Native, React.js, .Net Framework/Core, Web API/ASP.Net, Razor, Jekyll, Xamarin Android/iOS/Forms

Tools: Git, Google Firebase (Functions, RTDB, Firestore, Authentication, Storage), Visual Studio/Code, Linux, Ansible, Microsoft Azure, Amazon EC2, Adobe Suite, L^AT_EX

EMPLOYMENT & EXPERIENCE

Code repositories, app store links and further details available at danrichardson.me

Research Engineer

Action Lab, Melbourne; 2020 - Present

I am the **lead developer** and researcher of *Paroli*: a web platform which supports multiple organisations in South Asia to run affordable, COVID-safe engagements through digitally-augmented phone calls [Website, Git]. I designed and implemented the full Paroli **JavaScript** and **TypeScript** stack (**Vue.js**, **Node.js**, **React**, **Google Firebase**, **FreeSWITCH**, **AWS EC2**, **Twilio**, **Git**, **Ansible**), and **led a team of developers** to develop further features. I organised the deployment of Paroli within multiple countries, offering **technical support** for international stakeholders and generating **financial plans** for the system.

Led multiple research & development projects with several partner organisations: Oxfam in Bangladesh and Caritas Nepal on the *Paroli* project; worked with VACRO to produce **wireframes** and provide **technical consultation** on an app to support Victorian prison leavers; and worked with the Red Cross through an international volunteer programme, **leading three teams of developers** in an **Agile development** process.

Consulting Developer

International Federation of the Red Cross Red Crescent, Geneva; 2018

I worked in the Innovation Team at the IFRC's Geneva headquarters to develop and support the international deployment of *TalkFutures*: a mobile and web platform developed using **Xamarin Android**, **Xamarin iOS**, and **Vue.js**, with a **Web API** service hosted on **Microsoft Azure** [Git]. *TalkFutures* successfully created dialogue with members from 86 different National Societies regarding the challenges the Federation should prepare for.

Visiting UX Researcher

International Computer Science Institute, Berkeley; 2017

Worked within a small team to develop a user onboarding experience built with **JavaScript** and **Bootstrap** for a MOOC platform; designed and hosted participant workshops and **think-aloud walkthroughs** to assess it.

Computing Science Doctoral Candidate

Newcastle University, UK; 2015-2020

As a part of my PhD research, I was the sole developer and designer on the *OurPlace* platform: a cross-platform app which allows users to easily produce, share and complete creative place-based mobile learning activities [Website, Git]. Within one **C#** project, I designed and developed its **Xamarin iOS** and **Xamarin Android** applications, and their supporting **ASP.Net** website, **Web API 2** service and **Entity Framework** database hosted on **Microsoft Azure**. I created interfaces with phone and tablet support, using **XML** in **Visual Studio** to develop the **Android GUI**, and **XCode** to develop the **iOS UI**. As **project lead**, I designed and delivered **design research workshops, interviews and deployments** to engage with hundreds of stakeholders. *OurPlace* has supported teachers, students and community experts in creating and sharing rich, digital experiences in authentic settings, without the need for large budgets or technical expertise. The app has been used by dozens of community groups and hundreds of students across nine different schools, in contexts ranging from local parks to lighthouses, and from zoos to castles. I also supported one of my partner organisations in securing a **\$32,000 grant** to finance a staff role dedicated to delivering *OurPlace* activities.

Research Developer

Culture Lab, Newcastle University, Newcastle upon Tyne; 2014 - 2015

Contributed to several research projects, including: *Speeching*, a **C# Xamarin Android** and **ASP.net** platform designed to assist in therapy for people living with Parkinson's; and *VoiceBoard*, a Raspberry Pi and **Python**-based device which provided a peer support platform for people experiencing homelessness. Was the **lead full-stack developer** on MySkinSelfie: a **Xamarin Forms** app with a privacy focus, designed for easily tracking skin conditions over time, using **Web API** and **Microsoft Azure's encrypted Blob Storage** [Git]. The app was successfully deployed within the UK's **National Health Service (NHS)** for a **usability study**, and I discussed the project live on **BBC Radio**.

Gameplay Programmer

Lemon Moose Games, Gateshead; 2014

Used **Javascript** server-side technologies and **C#** in **Unity3D** to develop a variety of video games in a small team towards client specifications.

Personal Projects & Interests

Developed an open-source personal project, MovieKeeper, to learn **React Native** [Git]. MovieKeeper supports scanning, filtering and rating movies in your physical media collection, using a **serverless architecture** consisting of **Google Firebase Functions** and **Firestore** to query and manipulate results from the eBay **API** and IMDB. Currently developing a **ChatGPT**-powered feature which uses users' libraries for dynamic trivia content.

I love movies, games, and photography, and I have recently gained a passion for DIY home improvement and building custom furniture. I also have two very cute dogs.

EDUCATION & ACADEMIA

PhD in Computing Science (Digital Civics)

Newcastle University; 2016 - 2020

Thesis title: *Local Communities as Infrastructure for Place-Based Mobile Learning*

Master of Research - Digital Civics

Newcastle University; 2015 - 2016

Master of Computing Science - Games Engineering

Newcastle University; 2010 - 2014

Published on 16+ papers at recognised international venues, including 4 which I wrote and presented as first author. I was a lead organiser and chair of the ACM COMPASS'21 conference, and designed and ran an engagement programme for offshore students starting university during the pandemic. Secured \$50,000 AUD of funding to run *Paroli* studies in Bangladesh.

Up-to-date details and PDFs of my publications, PhD thesis, and my UX researcher CV are available at danrichardson.me.

References available upon request.